

Method and system for unambiguous addressability in a distributed application framework in which duplicate network addresses exist across multiple customer networks

1/12

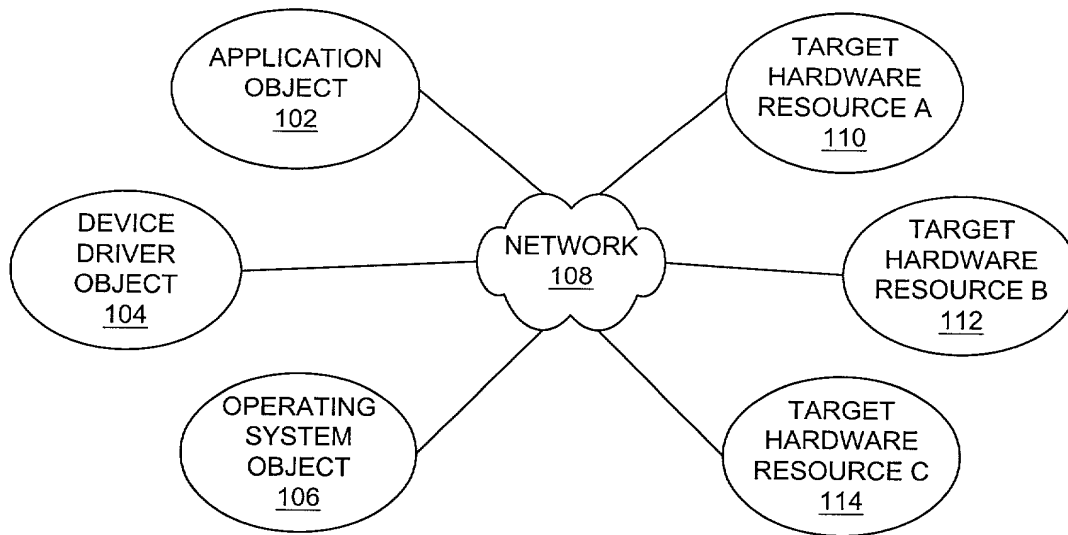


FIG. 1A
(PRIOR ART)

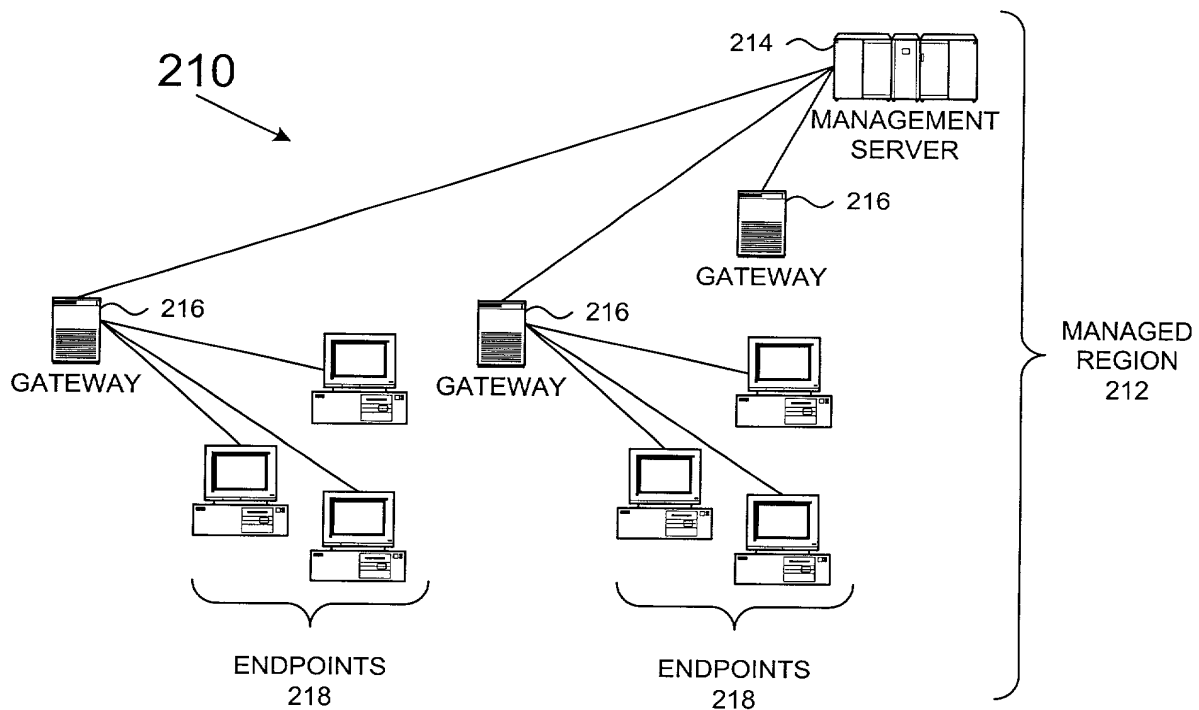


FIG. 2A

2/12

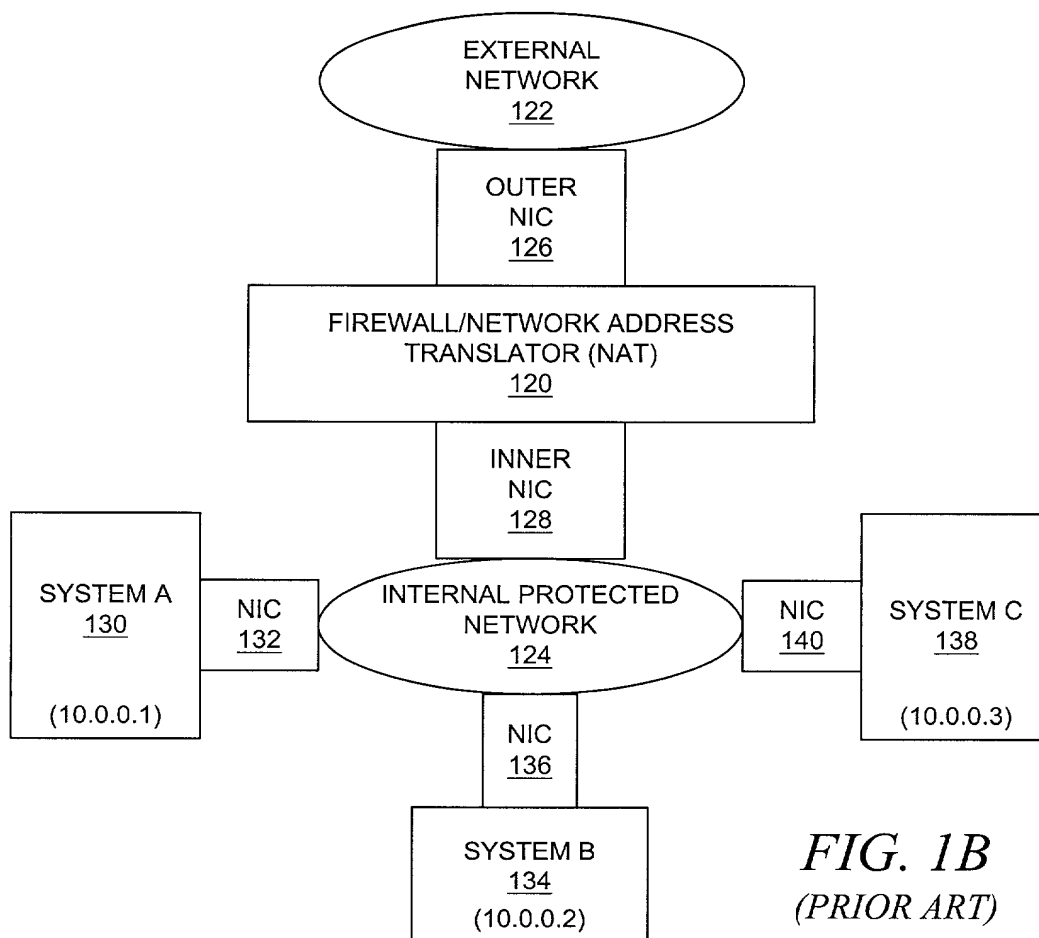


FIG. 1B
(PRIOR ART)

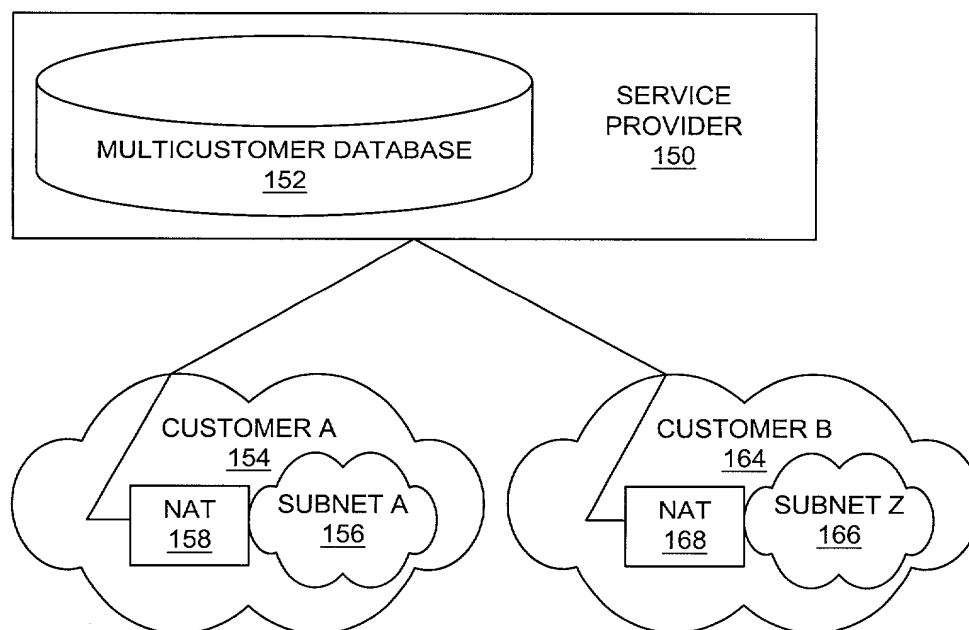


FIG. 1C

Method and system for unambiguous addressability in a distributed application framework
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3/12

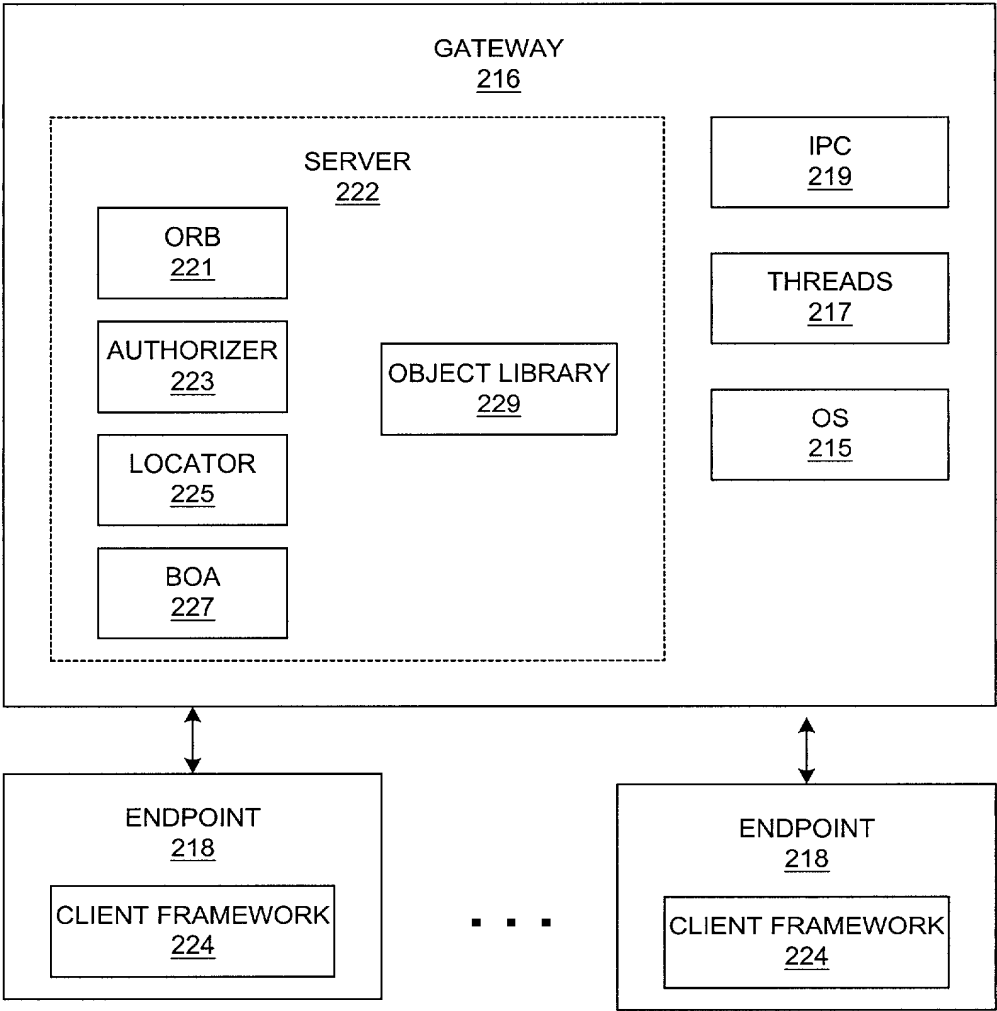


FIG. 2B

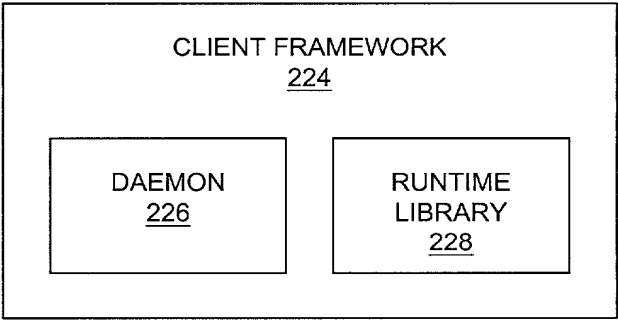


FIG. 2C

Method and system for unambiguous addressability in a distributed application framework
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4/12

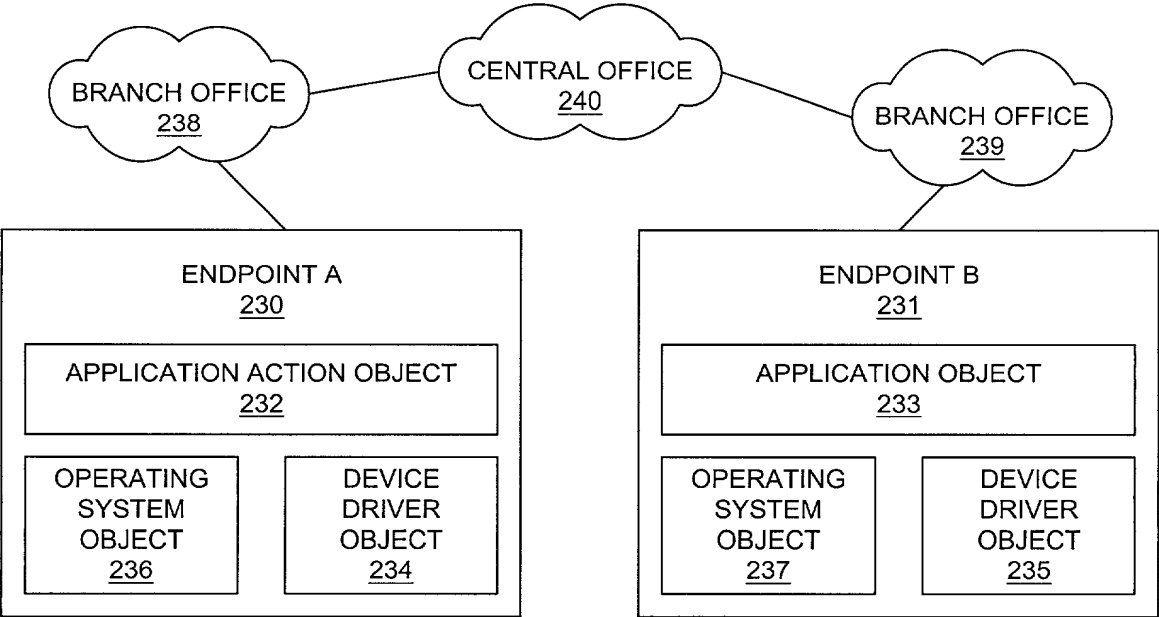


FIG. 2D

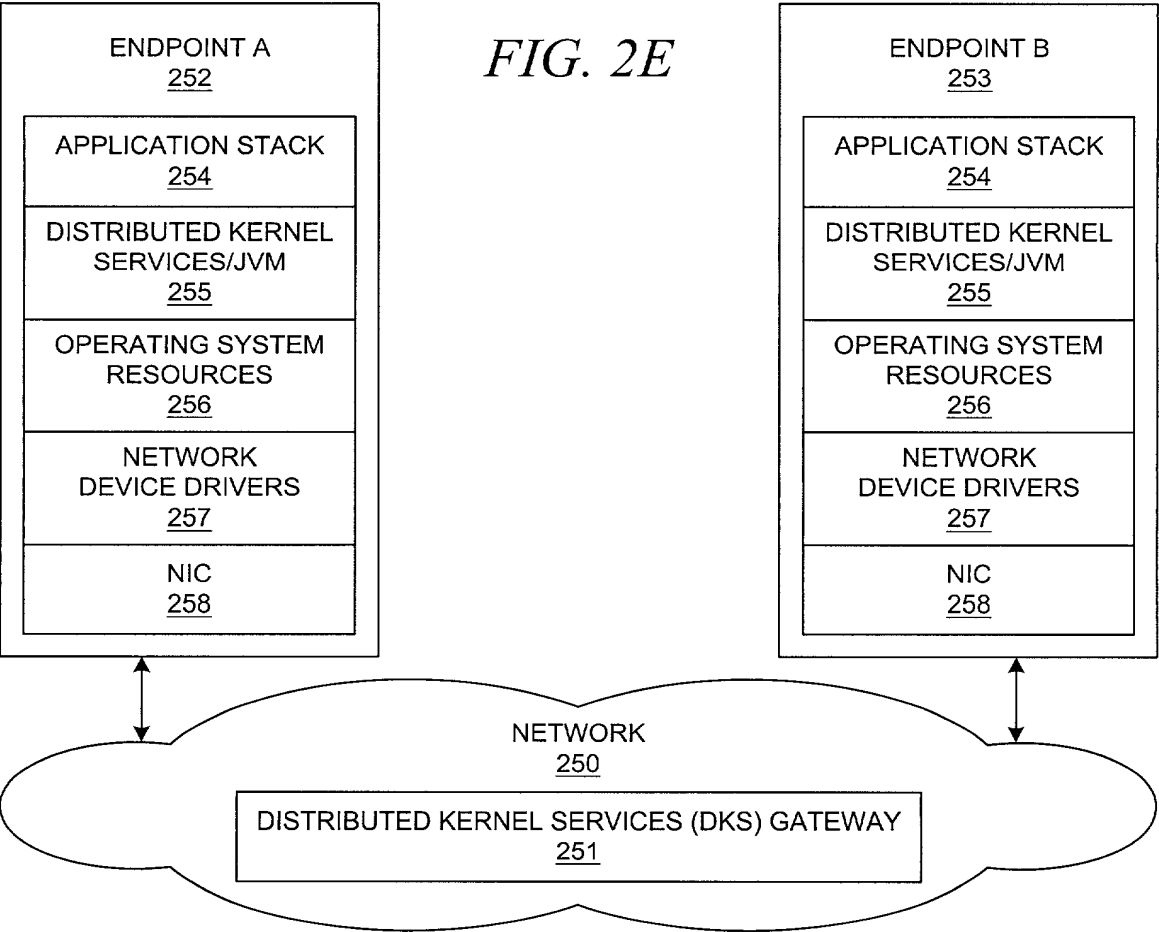


FIG. 2E

Method and system for unambiguous addressability in a distributed application framework
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5/12

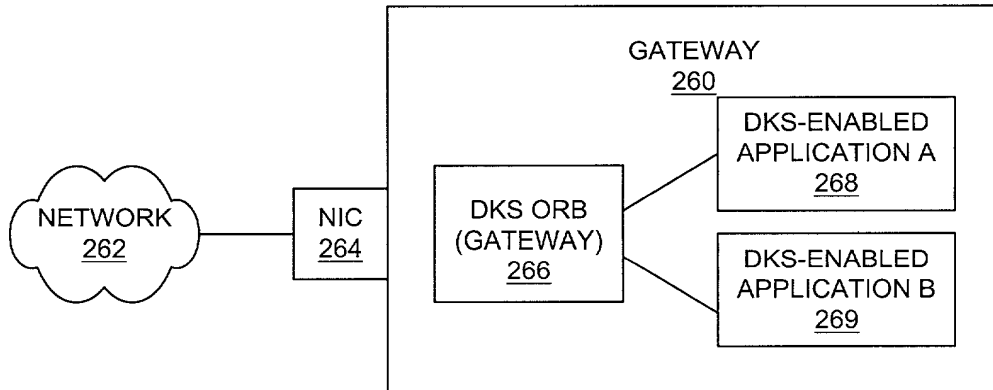


FIG. 2F

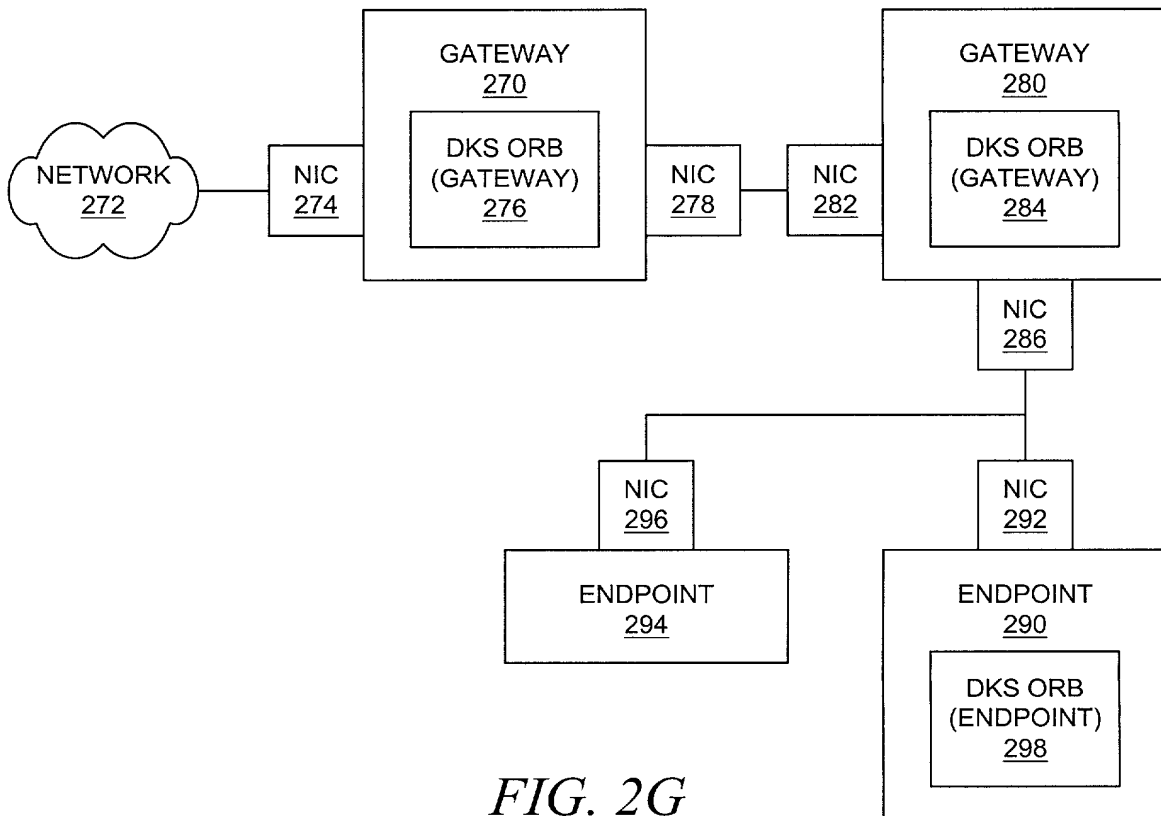


FIG. 2G

Method and system for unambiguous addressability in a distributed application framework
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6/12

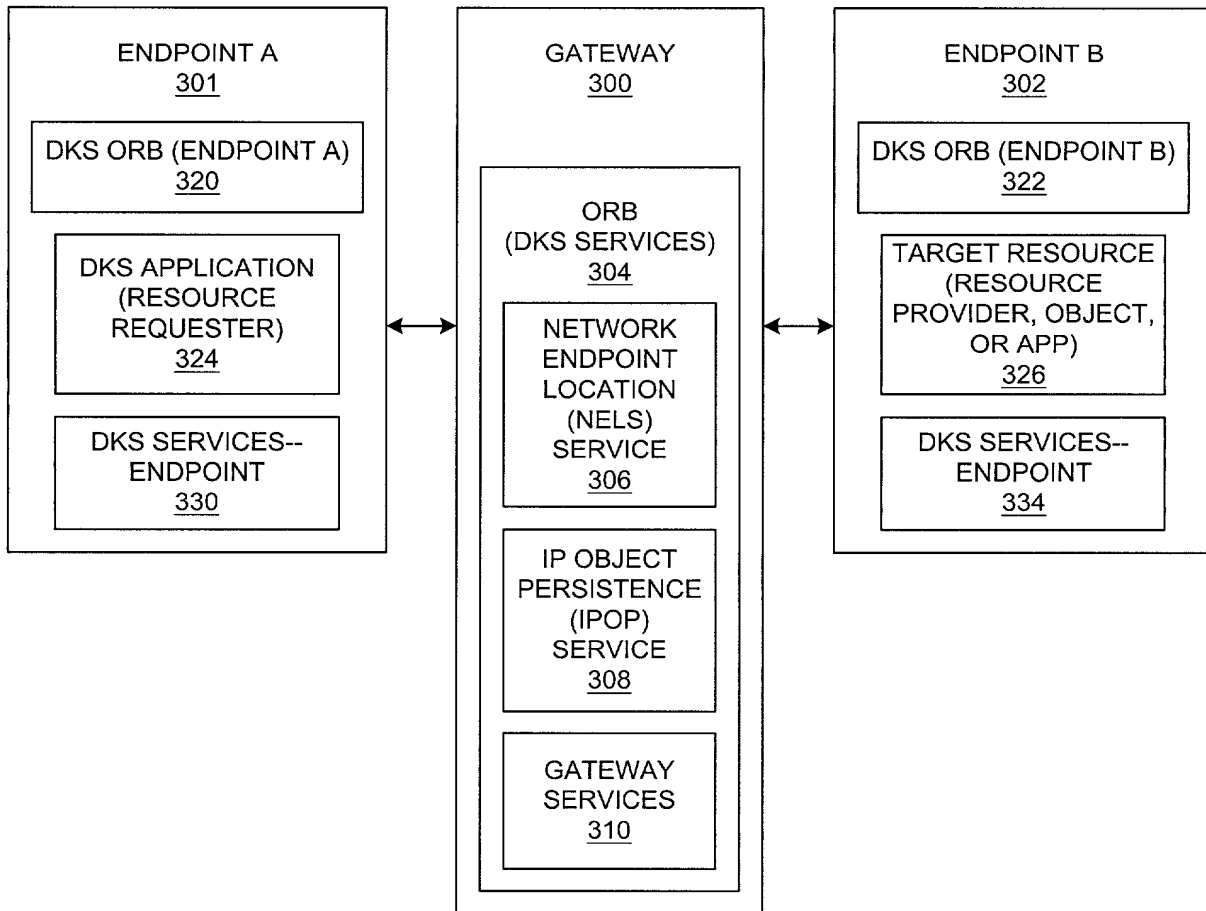


FIG. 3

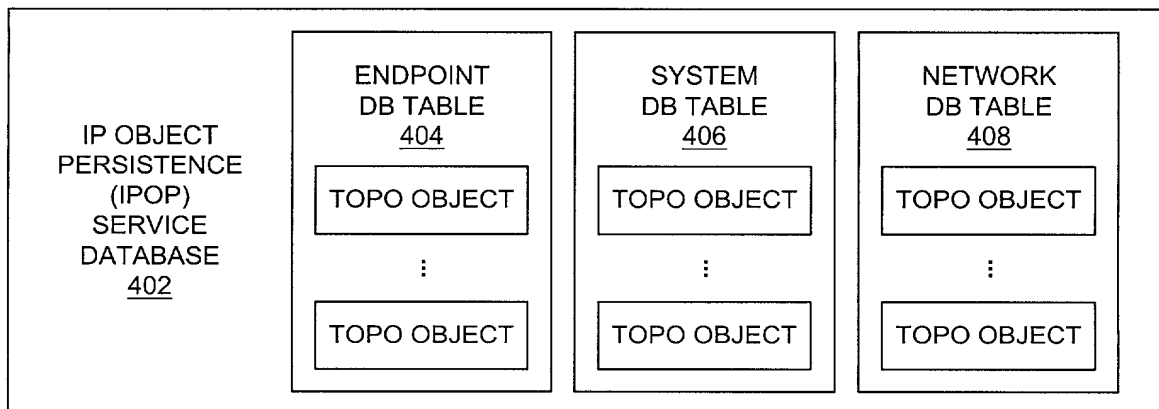
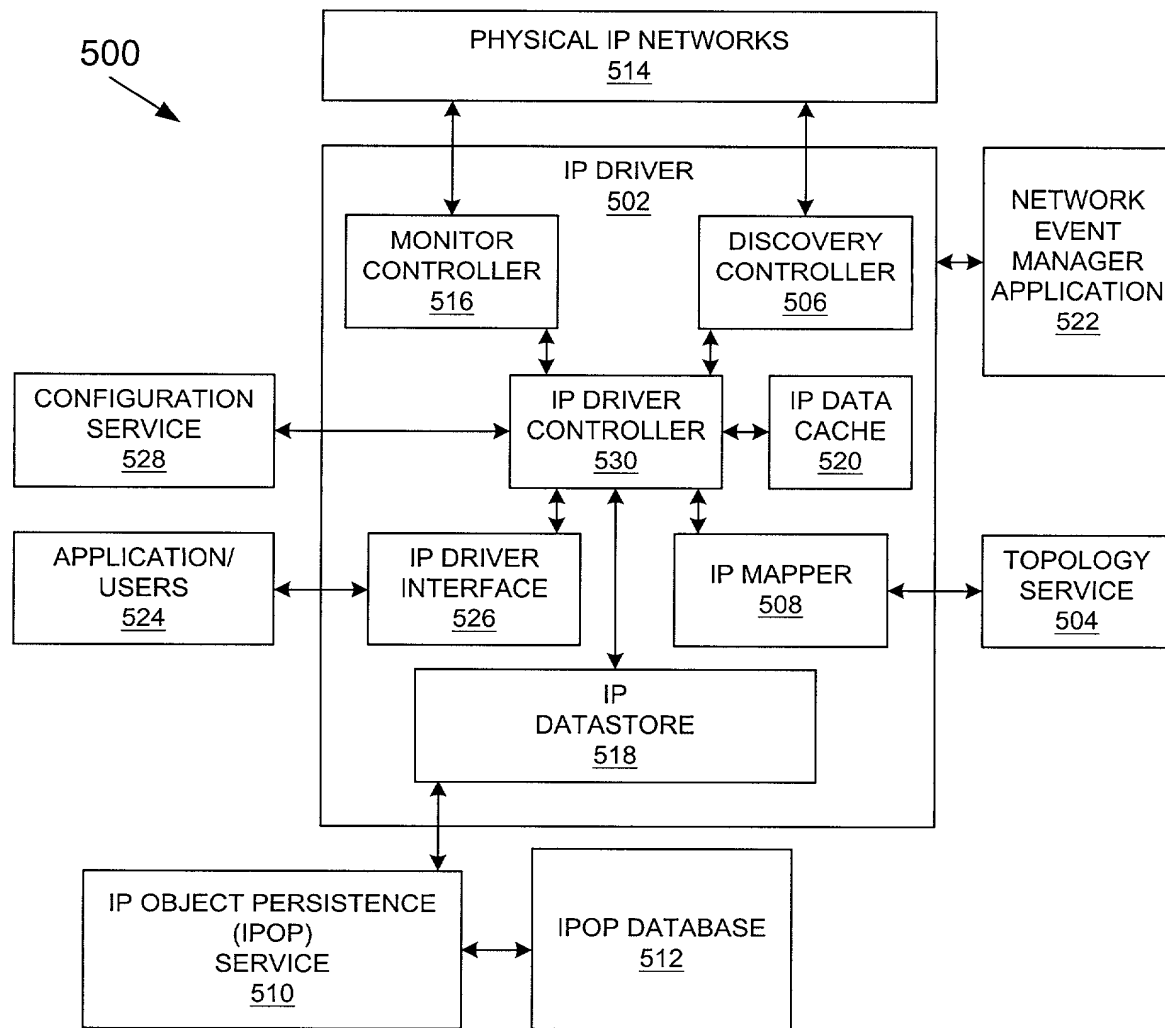
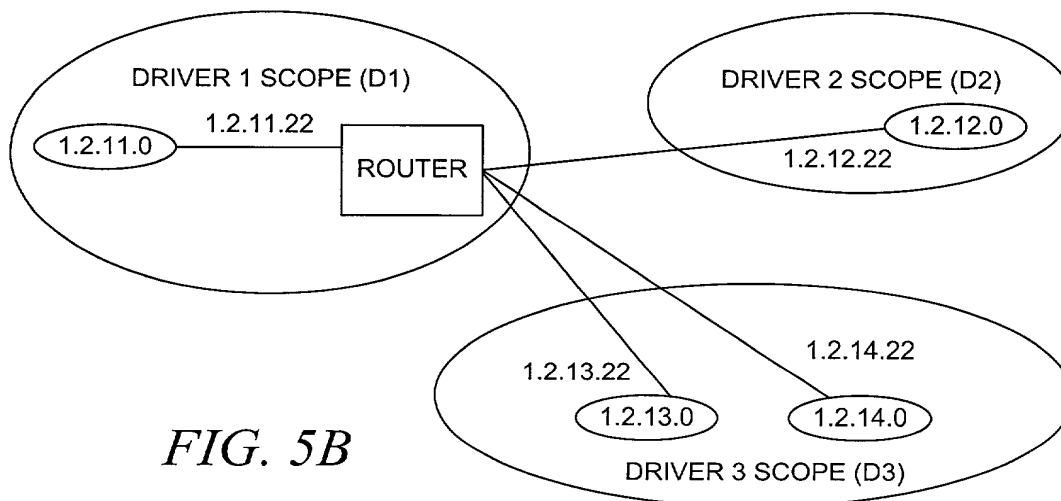


FIG. 4

**Method and system for unambiguous addressability in a distributed application framework
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7/12

*FIG. 5A**FIG. 5B*

8/12

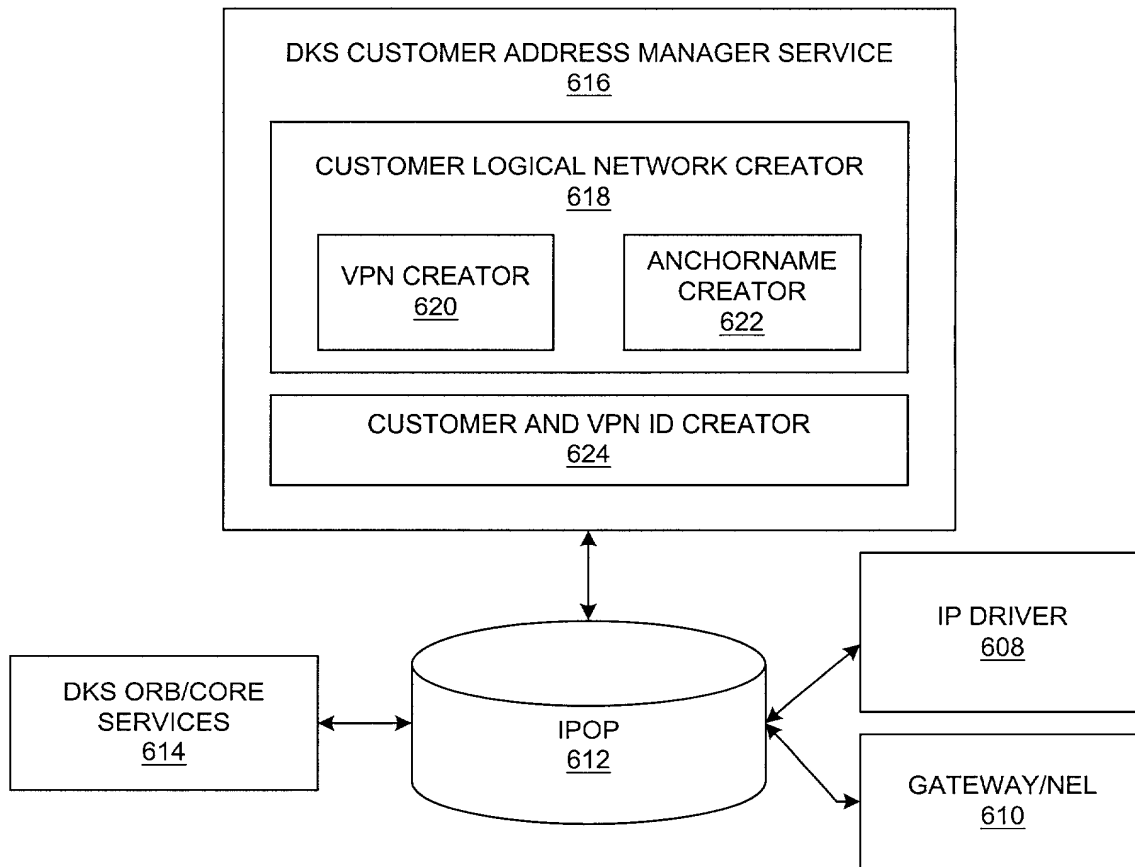


FIG. 6A

850

Network Management Application

NETWORKS REQUIRING VPN CREATION--DUPLICATE ADDRESSES EXIST

PHYSICAL NETWORK ADDRESS: 10.7.205.103 ~ 852

CUSTOMER ANCHORNAME: AUSTIN\BLDG1 ~ 856

VPN ID: ~ 870

PHYSICAL NETWORK ADDRESS: 10.7.205.103 ~ 854

CUSTOMER ANCHORNAME: AUSTIN\BLDG2 ~ 858

VPN ID: ~ 872

878 ~ ☒ CHANGE VPN ID FOR ENTIRE SCOPE

SET ~ 874

876 ~ CLEAR

FIG. 8

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9/12

```

Public Class IPActionObject {

    Endpoint sourceEP;
    Endpoint targetEP;

    // CONSTRUCTOR
    IPActionObject( Endpoint targetEP, Endpoint sourceEP ) {
        .
        .
        .
    }
    VOID performAction( ) // EXECUTES ACTION METHOD
    .
    .
    .
}

```

FIG. 6B

```

Public Class Endpoint {

    // public variables
    long   EObjectID; // ID to object (both private and public network addresses)
    InetAddress EIPAddress; // physical network address (private or public)
    long   EPVPN; // virtual private network ID

    //get/set of variables
    public long      getObjectID( ) { ... }
    public InetAddress getAddress( ) { ... }
    public long      getVPN( ) { ... }

}

```

FIG. 6C

```

Public Class EndpointCustomer extends Endpoint {

    public getVPNGW( ) {
        //gets the only gateway which has access to a particular private network
        .
        .
        .
    }
    //private variables only set/accessed by EP creator IPOP
    long   customerHashNumber;
    String customerName;
    String customerAnchorPath;
    Long   objectloFPrivateGatewayRoute

}

```

FIG. 6D

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10/12

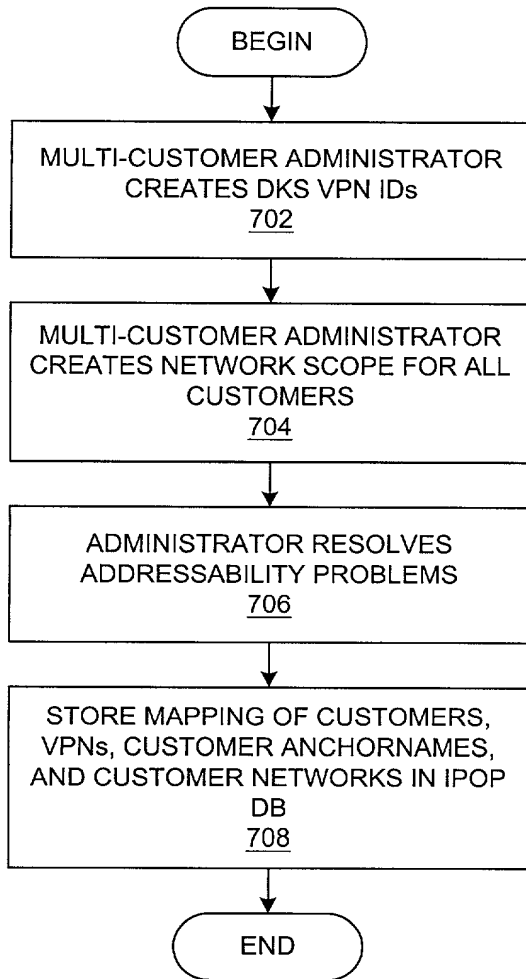


FIG. 7A

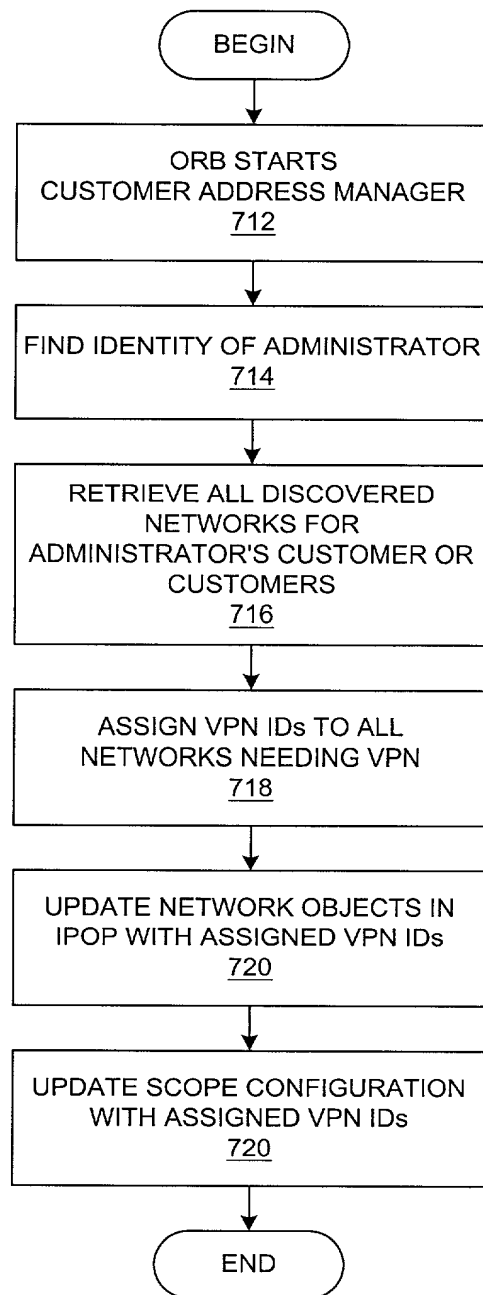


FIG. 7B

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11/12

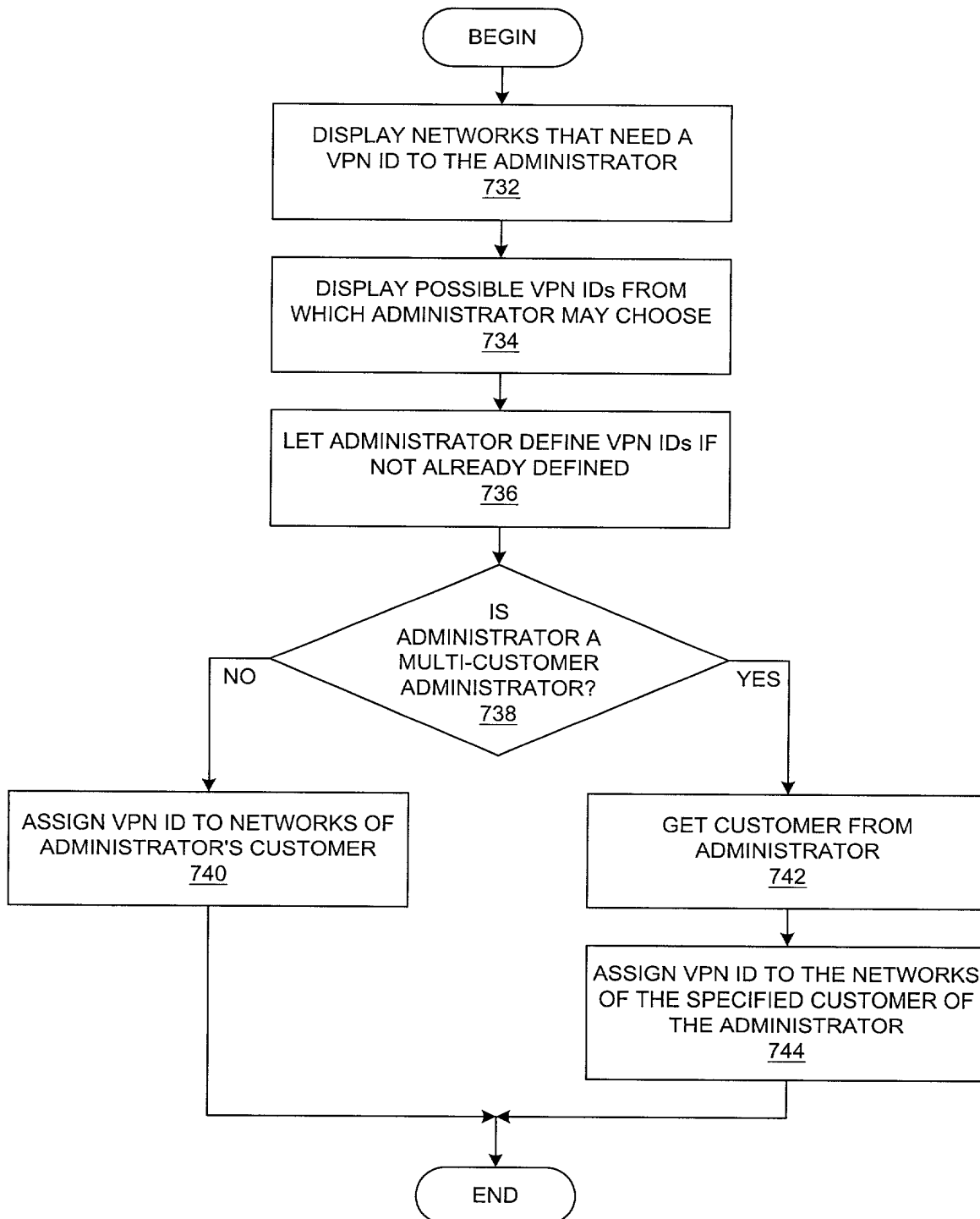


FIG. 7C

Method and system for unambiguous addressability in a distributed application framework
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12/12

